United States Coast Guard

T-BOAT
INSPECTION BOOK

Name of Vessel	
Official Number	
Date Completed	**Location**
SOLAS Certificates Issued ☐ Yes ☐ No	
Route ☐ Oceans ☐ Limited Coastwise ☐ Lakes / Bays / Sounds ☐ Coastwise ☐ Great Lakes ☐ Rivers	
Inspection Type ☐ Inspection for Certification (COI) ☐ Reinspection ☐ Drydock Inspection	
Streamlined Inspection Program (SIP) Participant ☐ Yes ☐ No	

Inspectors

1. _____ **2.** _____

CG-840 T
Rev. 1/99

Total Time Spent Per Activity:

Regular Personnel (Active Duty)			
ACTIVITY TYPE	ACTIVITY	TRAINING	(PERS) MI

TOTAL ADMIN HOURS	TOTAL TRAVEL HOURS

Reserve Personnel			
ACTIVITY TYPE	ACTIVITY	TRAINING	(PERS) MI

TOTAL ADMIN HOURS	TOTAL TRAVEL HOURS

Auxiliary Resources	
TOTAL BOAT HOURS	TOTAL AIRCRAFT HOURS

Use of T-Boat Inspection Book:

This inspection book is intended to be used as a job aid by Coast Guard marine inspectors during inspections of U.S. flagged small passenger vessels subject to 46 CFR Subchapter T. The lists contained within this book are not intended to limit the inspection. Each marine inspector should determine the depth of inspection necessary. A checked box should be a running record of what has been inspected. It does not imply that the entire system has been inspected or that all or any items are in full compliance. This job aid does not constitute part of the official inspection record.

This document does not establish or change Federal laws or regulations. References given are only general guides. Refer to IMO publications, CFR's, NVIC's or any locally produced cite guides for specific regulatory references. Not all items in this book are applicable to all vessels. Due to recent regulatory revisions, old Subchapter T cites (applicable to existing vessels on or before March 10, 1996) are provided in addition to new Subchapter T cites, and are designated by parentheses.

NOTE: *Guidance on how to conduct inspections of U.S. flagged small passenger vessels can be found in the Marine Safety Manual (MSM) Volume II, Chapter 6: Inspection of Vessels for Certification. All MSM cites listed in this book refer to MSM Volume II unless otherwise indicated.*

Pre-inspection Items:

- Review MSIS records.
  - MIPIP
  - MICOI
- Obtain copies of forms to be issued.

Post-inspection Items:

- Issue letters/certificates to vessel.
- Complete MSIS entries.
  - MIAR
  - MSDS
  - MIDR
  - VFLD
  - VFID
- Initiate Report of Violation (ROV) if necessary.

Table of Contents:

Section 1: Administrative Items

IMO Applicability Dates:

Reference	Date
SOLAS 1960	26 MAY 65
SOLAS 1974	25 MAY 80
1978 Protocol to SOLAS 1974	01 MAY 81
1981 Amendments (II-1 & II-2)	01 SEP 84
1983 Amendments (III)	01 JUL 86
Various additional amendments to SOLAS	
MARPOL 73/78 Annex I	02 OCT 83
MARPOL 73/78 Annex V	31 DEC 88
COLREGS 1972	15 JUL 77
Various additional amendments to COLREGS	
Load Line 1966	21 JUL 68
STCW 1978	28 APR 84
1991 Amendments	01 DEC 92
1994 Amendments	01 JAN 96
1995 Amendments	01 FEB 97

Involved Parties & General Information:

Vessel's Representatives _____ _____
Phone Numbers

Owner—Listed on DOC (if applicable), or COFR
☐ No Change

Operator
☐ No Change

Vessel Information:

Last Drydocking Date	Next Drydocking Date
Location of Last Drydocking	
Built Date (use delivery date)	
Overall Length (in feet)	
Maximum Passengers Allowed	
Overnight Accommodations ☐ Yes ☐ No If yes, how many? _____	

Section 2: Certificates and Documents

Name of Certificate	Issuing Agency	ID #	Port Issued	Issue Date	Exp. Date	Endors. Date
Certificate of Documentation ☐ No Change	USCG					
Passenger Ship Safety (PSS) ☐ No Change	USCG					
Load Line ☐ No Change						
International Tonnage (ITC) ☐ No Change						
Safety Management (SMC) ☐ No Change						
Document of Compliance (DOC) ☐ No Change						

Name of Certificates	Issuing Agency	ID #	Port Issued	Issue Date	Exp. Date	Endors. Date
FCC Station License ☐ No Change	FCC					
FCC Safety Certificate ☐ No Change	FCC					
FCC Operations Permit ☐ No Change	FCC					
FCC Marine Radio Operator Permit ☐ No Change	FCC					

Certificates:

☐	COI posted • All pages visible	46 CFR 176.107 46 CFR 176.302
☐	Stability letter posted	46 CFR 176.306
☐	Small Passenger Vessel (SPV) decal posted	46 CFR 176.310
☐	Station bill posted (vessels > 65 feet with more than 4 crew members)	46 CFR 185.514
☐	Waste management plan (oceangoing vessels ≥ 40 feet)	33 CFR 151.57
☐	Red Cross first aid / CPR cards for 50% of crew	NVIC 1-91
☐	Annual drug and alcohol program audit	46 CFR Part 16
☐	Liferaft servicing certificates • Annual service	46 CFR 160.151-57(p) SOLAS 74/78 III/19.8
☐	Fixed fire extinguisher servicing certificates • Annual service	46 CFR 176.810(b)(2)
☐	Required international safety convention certificates posted and valid	46 CFR 176.302

Manning Certification:

☐	Operator's license • Name • Issue date • Tonnage • Route	46 CFR 15.805 46 CFR 185.402

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☐ Mate's license — 46 CFR 15.810, 46 CFR 185.402

- Name
- Issue date
- Tonnage
- Route

Logs and Manuals:

☐ Current training logbook — 46 CFR 185.420

- Date
- General description of training

☐ Lifesaving equipment maintenance records — 46 CFR 185.702, SOLAS 74/78 III/18, SOLAS 74/78 III/19

- Periodic checks as required
- Onboard training in use of lifesaving equipment (all crew members)
- Visual inspection of survival craft / rescue boat and launching appliances
- Operation of lifeboat / rescue boat engines
- Lifesaving appliances, including lifeboat equipment examined

☐ Bridge log

- Steering gear drills — SOLAS 74/78 V/19-2
- Emergency steering drills
- Monthly fire and lifeboat drills — SOLAS 74/78 III/25
- Casualties (navigation equipment and steering gear failures reported) — 46 CFR 185.702, 46 CFR 185.520, 46 CFR 185.524

☐ SOLAS training manual — SOLAS 74/78 III/18.2

Notes: _____

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Section 3: Inspection Items

Navigation Safety:

- ☐ Voyage plan — 46 CFR 185.503
  (vessels on oceans / coastwise routes, vessels with overnight passengers)
- ☐ Passenger count — 46 CFR 185.504
  (if voyage plan not required)
- ☐ Emergency instruction list posted — 46 CFR 185.510
- ☐ Navigation publications — 46 CFR 184.420
  - Current and corrected charts (large enough scale to navigate safely)
  - U.S. Coast Pilot
  - Coast Guard Light List
  - Tide tables
  - Tidal current tables
  - International Rules of the Road (SOLAS only)
- ☐ Navigation lights — 46 CFR 183.420, 33 CFR Part 84, 72 COLREGS
  (vessels > 65 feet must meet UL 1104)
  - Side shields
    - Fitted as needed
    - Painted black matte
- ☐ Radar — 46 CFR 184.404
- ☐ Magnetic compass — 46 CFR 184.402
  (vessels on oceans / coastwise / limited coastwise routes)
  - Illuminated (unless limited to daytime operations)
- ☐ Signaling devices (sound) — 33 CFR Part 86
  - Whistle / horn tested
  - Proper bell size

Notes: _____

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☐ Signaling devices (distress)

- Flares and day smokes (correct number and expiration) — 46 CFR 180.68
- Stowed in brightly colored, portable watertight container
- Marked “Distress Signals” — 46 CFR 185.614
- Substitutions with proper expiration date

IF vessel travels:	**THEN it must carry:**
Oceans / coastwise / limited coastwise / Great Lakes route	6 red hand flares and 6 orange day smokes
Lakes, bays, sounds / rivers route	3 red hand flares and 3 orange day smokes

☐ Internal communications tested — 46 CFR 184.602

- A fixed means of two-way communication from
  - Operating station to machinery space (single screw vessels)
  - Operating station to auxiliary steering single screw vessels)
  - Hand-held radios acceptable

☐ Pilothouse control of propulsion engine systems — 46 CFR 184.620

☐ Radio equipment — 46 CFR 184.502, 47 CFR 80.905

IF vessel travels:	**THEN it must have:**
More than 1000 feet from shore but less than 20 NM	1 VHF
20 NM to 100 NM	1 VHF and 1 MF
100 NM to 200 NM	1 VHF, 1 MF, 1 SSB or INMARSAT radio, and 1 NAVTEX receiver
More than 200 NM	2 VHF, 1 MF, 1 SSB or INMARSAT radio, 1 NAVTEX receiver, 1 distress frequency receiver, and 1 automatic radiotelephone alarm signal generator

Notes: _____

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☐ Emergency broadcast placard posted — 46 CFR 184.506

☐ Electronic position fixing device — 46 CFR 184.410
(vessels on oceans route only)

☐ EPIRB (406 MHz) tested — 46 CFR 185.728 (46 CFR 180.15(g))

- Float-free arrangement — 46 CFR 180.64
- Battery expiration date
- HRU / Hydro expiration date
- NOAA registered
- Tests logged
- Marked with vessel name — 46 CFR 185.604(c)

☐ Public address system tested — 46 CFR 184.610
(also required on existing vessels by 11 MAR 01)

IF vessel is:	AND carries:	THEN vessel must have:
> 65 feet	→	Fixed installation
≤ 65 feet	> 49 passengers	Battery bullhorn
≤ 65 feet	≤ 49 passengers	None required

☐ Bridge windows

- Safety glass — 46 CFR 177.1010
- Adequate strength — 46 CFR 177.1020
- Allow 70% light / safety glass — 46 CFR 177.1030

Structural Integrity:

☐ External hull structure — 46 CFR 176.802

- Decks
- Shell
- Bulkheads
- Strength members
- Visible damage
- Obvious repairs, modifications, or alterations
- Rails / guards

Notes: _____

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☐	Hull markings • Draft marks and loading marks • Name / hailing port	46 CFR 185.602 (46 CFR 185.30-3) 46 CFR 67.123
☐	Internal compartment structures • Dry • Visible damage • Obvious repairs, modifications, or alterations • Means of escape • Ceilings • Inspection ports / ventilation • Rails / guards	46 CFR 176.802
☐	Watertight integrity • Subdivision watertight bulkheads • Watertight doors / hatches – Operable from both sides – Captive devices attached to all unhinged covers – Coamings (6 inches-exposed routes; 3 inches-protected routes) – Knife edges – Gaskets – Hardware • Closure means for openings in hull (local and remote)	46 CFR 176.802 46 CFR 179.360 46 CFR 171.124
☐	Scuppers / freeing ports	46 CFR 171.145 46 CFR 171.150
☐	Dead light covers on port lights below main deck	46 CFR 171.117 46 CFR 179.350
☐	Deck rail • Height requirements (39.5 inches minimum) • Point load requirements (200 pounds minimum)	46 CFR 177.900

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General Health and Safety:

☐ General alarm tested	46 CFR 183.550
☐ Upper decks marked for maximum number of passengers per stability letter	46 CFR 185.602(g)
☐ Crew accommodations	(46 CFR 177.30-5)
• Adequate berthing	46 CFR 177.710
• Sanitary conditions	46 CFR 176.818
☐ Passenger accommodations	(46 CFR 177.30-5)
• Adequate berthing	46 CFR 177.810
• Adequate seating	46 CFR 177.820
• Sanitary condition	46 CFR 176.818
☐ Means of escape	46 CFR 177.500
• Operable from both sides	
• Marked "Emergency Exit, Keep Clear"	46 CFR 185.606
☐ Cooking and heating systems	
• B-15 Class fire boundaries	46 CFR 177.410(c)(1)
• No open-flame or high-heat system on GP / FRP vessels	
• LPG / CNG stowage	46 CFR 184.240
• Shutoff valves installed on gas systems	
• Sea rails installed on galley stoves	46 CFR 184.220
☐ Sanitary inspection	46 CFR 176.818
• Galley	
• Serving pantries	
• Lockers	
☐ Ventilation	46 CFR 177.600
• Ventilation	
☐ Passenger Safety Orientation	46 CFR 185.506
• Public announcement	
• Card or pamphlet	

Notes: _____

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☐ Crew and passenger list — 46 CFR 185.502

Ground Tackle:

☐ Proper ground tackle — 46 CFR 184.300 (46 CFR 184.10-1)

Number of Anchors	Weight (lbs.)

Number of Cables	Length	Size

☐ Mooring lines — 46 CFR 184.300 (46 CFR 184.10-1)

☐ Sails and rigging — 46 CFR 177.330

Lifesaving Equipment:

☐ Stowage of survival craft — 46 CFR 180.130 46 CFR 180.137

☐ Embarkation aids — 46 CFR 180.150

☐ Number and type of survival craft — 46 CFR 180.200

Item	Number	Capacity (Persons)

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☐ **Lifefloats and buoyant apparatus**	46 CFR 180.200(a)(2)
• Coast Guard approval	46 CFR 180.175(d)
• Lifeline	46 CFR 180.175(f)
• Pendants	46 CFR 160.010-8
• Two paddles per lifefloat	
– 4 feet in length	
– Marked with vessel name	46 CFR 185.604(g)
• Waterlight with proper battery	
– Properly mounted, secure splices	
– Watertight globe	
– Float-free	
• Marked with vessel name	46 CFR 185.604(a)
• Stowage	(46 CFR 180.20-5)
• Properly sized and approved weak link	46 CFR 180.130
• Sea painter	46 CFR 180.137
• Retro-reflective tape	46 CFR 160.037
	NVIC 2-63
☐ **Inflatable buoyant apparatus**	46 CFR 180.175
• Annual service	
☐ **Inflatable liferafts**	46 CFR 180.175
	46 CFR 180.200
• Capacity of 6 or more persons	
• Stowage	
– Float-free	
• Annual service	
☐ **Inflatable survival craft placards posted**	46 CFR 185.518
☐ **Rescue boats / rescue platforms** (vessels > 65 feet)	46 CFR 180.210 (46 CFR 180.10-35)
• Marked with vessel name	46 CFR 185.604(a)(1)
• Capacity	46 CFR 185.604(d)
• Retro-reflective tape	46 CFR 185.604(i)
• Small, lightweight with floatation	NVIC 1-87
• Readily launched, easily maneuvered	
• Capable of recovering person without capsizing	
☐ **Survival craft maintenance** (vessels > 65 feet)	
• Manufacturer's instructions on board	46 CFR 185.702
• Inspections / examinations logged	46 CFR 185.720
• Weekly / monthly / quarterly / annually inspected / examined	46 CFR 185.722
	46 CFR 185.724
	46 CFR 185.726

Notes: _____

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☐ Lifejackets — 46 CFR 180.71

Adult _____ Children _____(10%)

- Retro-reflective tape — 46 CFR 185.604(h) (46 CFR 180.25-25)
- Lights (vessels on oceans / coastwise / Great Lakes routes) — 46 CFR 180.75 (46 CFR 180.25-20)
  - Watertight
  - Batteries dated or changed annually
- Marked with vessel name — 46 CFR 185.604(b) (46 CFR 180.25-15)
- Stowage — 46 CFR 180.78 (46 CFR 180.25-10) 46 CFR 185.604(f)
  - Marked
  - Child size PFDs separate from adult PFDs
  - Unlocked
  - If over 7 feet high, check quick release mechanism
  - PFDs carried in addition to lifejackets
- Number of lifejackets rejected by inspector _____ — 46 CFR 180.72

☐ Lifejacket donning placards posted — 46 CFR 185.516

☐ Ring lifebuoys — 46 CFR 180.70 (46 CFR 181.30-1) (46 CFR 181.30-10)

- Orange (vessels on oceans / coastwise routes)
- Lifeline (60 feet long)
- Waterlight with 3-foot lanyard and corrosion-resistant clip
- Retro-reflective tape — 46 CFR 185.604(i)
- Marked with vessel name — 46 CFR 185.604(a)
- Stowage (not permanently secured) — NVIC 1-87
- Vessels < 26 feet may carry 20-inch ring — 46 CFR 180.70(b)

Number with Lights	Number with Lines	Number of Others
Total Number of Ring Lifebuoys		

☐ First aid kit visible and readily available to the crew and properly marked “First Aid Kit” — 46 CFR 184.710 46 CFR 160.041

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Fire Protection:

☐ Fire and smoke detection systems
(required on existing wood / FRP vessels)
46 CFR 176.810(a)(7)
46 CFR 181.400(c)
46 CFR 181.400(e)
46 CFR 181.450

- Sensors tested
- Alarms tested

☐ Portable and semiportable fire extinguishers
46 CFR 176.810

- Annual service in accordance with NFPA 10
  - Date cylinders hydro-tested _____
- Proper location

46 CFR 176.810(b)(1)
46 CFR 181.500
46 CFR 181.520

Required		On Board	
Number	**Class**	**Number**	**Class**

☐ Fixed fire extinguishing systems
46 CFR 176.810(a)
46 CFR 176.810(b)
46 CFR 181.400
46 CFR 181.410
46 CFR 181.420
(46 CFR 181.20)

- Annual service
  - Date cylinders weighed _____
  - Date cylinders hydro-tested _____
- Sprinklers tested in vehicle spaces
- Alarms
- Engine / power ventilation shutdowns tested (engine shutdown not required on existing vessels with CO_2, BUT is required with Halon)
- Manual ventilation closures on protected spaces
- Instructions at controls and in space
- Piping
- Valves
- Controls

46 CFR 182.465(h)
(46 CFR 181.20-35)
NVIC 6-72

46 CFR 185.612

Spaces Protected	Agent	Capacity

Notes: _____

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☐ Fixed firefighting for galley vent hood system
(required on existing wood / FRP vessels)

46 CFR 181.400(d)
46 CFR 181.425
46 CFR 181.450

☐ Fire main system and stations

46 CFR 176.810(a)

- Fire main system tested
  - Piping
  - Valves
  - Fittings

46 CFR 181.310
(46 CFR 181.15)

46 CFR 176.810(c)

- Number hose stations required _____
- Fire hose
  - Minimum 5/8-inch hose and nozzle 25-50 feet in length
  - 1.5-inch hose and nozzle (required for vessels > 65 feet and vessels carrying > 49 passengers)
  - Nozzles and spanners

46 CFR 181.320
(46 CFR 181.15-10)

Number of Hoses Required	Number of Hoses On Board	Diameter of Each Hose	Length of Each Hose

☐ Fire axe
(vessels > 65 feet)

46 CFR 181.600
(46 CFR 181.35-1)

- Located in or near primary operating station
- Marked with vessel name

☐ Fire pumps tested
(ferry vessels carrying >49 passengers and all vessels > 65 feet)
NOTE: *If fire pump is NOT required, new vessels must have three 2.5 gallon buckets with an attached lanyard; each bucket must be marked with the vessel's name.*

46 CFR 181.300
(46 CFR 181.10)
46 CFR 181.610

- Piping
- Gauges
- Controls
- Manifold and valves
- Effective stream
- Strainers

Notes: _____

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Machinery:

☐ Main steering system tested	46 CFR 182.610 46 CFR 176.814 MSM Ch. 14
• Type _____	
• Rudder packing	
• Hoses	46 CFR 176.800
• Tubing	
• Piping	
• Tiller arms and connectors double-nutted / cotter pinned	
☐ Auxiliary steering system (if required) operable	46 CFR 182.620 MSM Ch. 14
• Type _____	
☐ Main propulsion engine tested	46 CFR 176.804 46 CFR 182.200
• Capable of being secured from pilothouse	
– Independent of speed control	
• Foundations	
• Controls	46 CFR 184.620(b) (46 CFR 175.00-29)
• Gauges	
– Engine RPM / oil pressure / water temperature operational and visible at each operating station (existing vessels—only oil pressure / water temperature operational and visible)	46 CFR 182.410(b) (46 CFR 182.15-5(b)) (46 CFR 182.20-5(b))
• Safety devices	
• Carburetor drip collector	
• Backfire flame arrestor	
☐ Cooling system	46 CFR 182.420
• Type of engine cooling system _____	46 CFR 182.410
• Temperature gauges (operating station)	46 CFR 182.422
• Installation	

Notes: _____

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☐ Exhaust system — 46 CFR 182.425

- Type of exhaust cooling system _____
- Loss of cooling alarm on vessel with wet exhaust (vessels with a separate exhaust cooling pump must have a loss of cooling alarm) — 46 CFR 182.425(b)(5) (46 CFR 182.15-15(a)(5))
  - Visible / audible
  - Located at operating station
- Leaks — 46 CFR 182.430 (46 CFR 182.15-20(a))
  - Seams
  - Elbows
  - Joints
  - Flexible hoses

☐ Fuel system — 46 CFR 176.804

- Tank space properly vented — 46 CFR 182.460 (46 CFR 182.15-45)
  - > 500 cubic feet = gooseneck > 2.5 inches
  - < 500 cubic feet = gooseneck > 1.5 inches
- Fuel tank vents — 46 CFR 182.470 (46 CFR 182.20-50)
  - Vent openings not located adjacent to possible sources of vapor ignition — 46 CFR 182.450(e) (46 CFR 182.15-35)
  - 30 x 30 mesh screen
- Independent fuel tanks grounded — 46 CFR 182.440(b)(4) (46 CFR 182.15-25(b)(4))
  - Electrically bonded to a common ground
- Portable fuel tanks — 46 CFR 182.458 MSM Ch. 10.A.2.i
  - Stowed on deck in racks
  - "No Smoking" placards posted
- Shutoff valves tested (tank and engines) — 46 CFR 182.455(b)(4) (46 CFR 182.15-40(b)(3)) (46 CFR 182.20-40(b)(3))
  - Located at the ends of each fuel line
  - If tank end not located outside of tank space, handle must be within 12-inch reach and shielded
  - Remote emergency fuel valves labeled for purpose and direction of operation / tested — 46 CFR 185.608 (46 CFR 185.30-20)
- Fuel strainers — 46 CFR 182.455(b)(6) (46 CFR 182.15-40(b)(5)) (46 CFR 182.20-40(b)(5))
- Fuel tank fill hose — 46 CFR 182.445(g) (46 CFR 182.20-30(d))
  - Top flange grounded to tank
  - Flexible hoses (SAE J-1942)
- Solid bottom type petcocks with tapered plugs and union bonnets — 46 CFR 182.455(b)(3) (46 CFR 182.15-40(a)(5)) (46 CFR 182.20-40(a)(4))
- Safety devices and alarms
- Termination of filling, sounding or vent pipes outside vessel

Notes: _____

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☐ Ventilation of machinery installations — 46 CFR 182.470

- Switch for exhaust blower (gasoline vessels) — 46 CFR 182.460(e)
  - Interlocked with ignition
  - Warning sign posted
- Engineroom intake and exhaust ventilation — 46 CFR 182.465 (46 CFR 182.15-45) (46 CFR 182.20-45)
  - Closure devices for spaces with fixed gas extinguishing system
  - Ducts secured and supported

Ventilators	Number and Type	
	Natural	Forced Air
Machinery Space		
Fuel Tank Space		

☐ Vapor detector — 46 CFR 182.480

- Operation procedures posted at operating station
- Proper number of sensors
- Operable for 30 seconds prior to engine start up
- Visual / audible alarm

☐ Machinery guards — 46 CFR 177.960 (46 CFR 177.35-15)

- Installed over exposed gears
- Belts
- Rotating machinery

☐ Vital systems piping — 46 CFR 182.710 (46 CFR 182.40-5)

☐ Watertight bulkheads — 46 CFR 182.720(d) (46 CFR 182.40-1)

- Piping
  - Metallic through fittings
- Valves
  - Reach rods
  - Free of sluice valves — 46 CFR 179.320(d) 46 CFR 171.114(b)
  - Operable

Notes: _____

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☐ Non-metallic piping materials — 46 CFR 182.720 (46 CFR 182.40)
- Rigid pipe non-vital systems only
- Flexible hose must meet SAE J-1492

☐ Shaft log free of excess leakage — 46 CFR 176.802(c)
- Reasonable dripping
- Testing ahead and astern
- Remaining adjustment on stuffing box bolts

☐ Bilge pumps tested — 46 CFR 176.804(h) 46 CFR 182.520(a)
- Source of power for each pump
- Overboard discharge
- Visual indicator for auto bilge pump operation — 46 CFR 182.530(c)

☐ Portable bilge pump tested (5 GPM) — 46 CFR 182.520(b) (46 CFR 182.25-10(e))
- Suction capable of reaching the bottom of all compartments

☐ Bilge piping
- Check valves in each compartment or stop / check valves at manifold — 46 CFR 182.510(c)
- Valve fitted on collision bulkhead — 46 CFR 182.510(d) (46 CFR 182.25-5(d))
  - Screw down valve type
  - Operable from weatherdeck if forward; readily accessible if aft

☐ Bilge high level alarm — 46 CFR 182.530
- Visible / audible
- Located at operating stations

☐ Deck machinery — 46 CFR 176.816
- Windlass
- Winches
- Capstans
- Controls
- Guards

Notes: _____

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☐ Pressure vessels required to be periodically tested — 46 CFR 176.812 (46 CFR 176.25-30(a))

- Inspected every 3 years

Service	Working Pressure	Relief Valve Setting	Date Tested or Examined

Electrical Equipment:

☐ Primary power and light system — 46 CFR 183.310

- Voltage _____
- Electrical source
  - ☐ Generator
  - ☐ Battery
- Grounding — 46 CFR 183.376

☐ Main engine generators — 46 CFR 176.806

☐ Independent generators — 46 CFR 183.322

- Multiple generators
  - Independent prime movers
  - Circuit breakers interlocked
  - Parallel operation must meet Subchapter J

Notes: _____

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☐ Batteries (and alternator, if required)

46 CFR 176.806
46 CFR 183.310
46 CFR 183.350
46 CFR 183.354

- Overload protection
- Ventilation
- Protective covering
- Battery charger with ammeter connected to charging circuit — (46 CFR 183.05-20)
- Cable connectors (permanent type)
- Corrosion-resistant tray or mounting

Service	Location

☐ Switchboards and distribution panels

46 CFR 183.330
(46 CFR 183.05-15)
(46 CFR 183.10-15)

- Circuits and electrical equipment marked and identified
  - Warning sign for multiple power sources — 46 CFR 183.220
- Protective covering
- Dripshield
- Overcurrent protection — 46 CFR 183.380

☐ Radios fused at main panel — 46 CFR 183.392

☐ Cable, wiring, receptacles, outlets, accessories

46 CFR 183.340
(46 CFR 183.05-40)
(46 CFR 183.05-45)
(46 CFR 183.05-50)
(46 CFR 183.10-20)

- Installation
  - Wire type
  - Wire size
  - Splices
  - Connectors
  - Metal wire supports every 24 inches
- Grounding
- Overcurrent protection — 46 CFR 183.370, 46 CFR 183.380

Notes: _____

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☐ Miscellaneous motors and controllers

- Proper location — 46 CFR 183.320
- Grounding — 46 CFR 183.372

☐ Lighting fixtures — 46 CFR 183.410 (46 CFR 18.01-5)

- Suitable guards
- Properly secured

☐ Portable lighting — 46 CFR 183.430 (46 CFR 184.30-1)

- At least two lights
  - One at operating station
  - One at entrance to propulsion / machinery space

☐ Emergency lighting tested — 46 CFR 183.432 (46 CFR 184.30)

- Type _____
- Automatically activated
- Not portable
- Connected to battery charger
- Operating capacity—2 hours

Pollution Prevention:

☐ Oil pollution placard posted — 33 CFR 155.450

☐ MARPOL V placard posted — 33 CFR 151.59

☐ Bilges free of oil and trash / debris — 46 CFR 176.830

☐ Marine sanitation device — 46 CFR 176.818, 46 CFR 184.704

- Type _____
- Sanitary — MSM Ch. 18.K.7.f(1)
- Discharge valve secured and locked — 33 CFR 159.95
- Tank vent 30 x 30 mesh screen
- ¾-full level indicator — 33 CFR 159.83

Notes: _____

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Section 4: Drills

☐ Fire Drill:

Initial response	Familiarity with duties	Space isolation
General alarms / signals	Familiarity with equipment	Smoke control
Crew response	Fire pumps started	Arrange care of passengers
Language understood by crew	Fire doors and dampers	Communications w/ bridge

(SOLAS 74/78 III/18.3; MSM Vol. II/22.C.7.i; NVIC 6-91)

Location: _____ Time on Scene: _____

Notes: _____

☐ Abandon Ship Drill:

General alarms / signals	Language understood by crew	Familiarity with equipment
Muster lists	Lifejackets	Egress procedures
Muster of crew / passengers	Familiarity with duties	Deploy survival craft
Crew response	Provide equipment	Communication w/ bridge

(SOLAS 74/78 III/18.3; MSM Vol. II/22.C.7.h)

Location: _____ Time to Water: _____

Notes: _____

Section 5: Drydock Inspection Items

Hull Structural Integrity:

☐ Vessel plans available
(vessels with load lines)

46 CFR 176.612

☐ External structural members

46 CFR 176.610
NVIC 7-95

- Plating
- Planking
- Caulking
- Reinforcing straps
- Stem
- Transom
- Bilge keels
- Keel
- Welds
- Pitting
- Signs of electrolysis

Overall Condition:

Poor	Good

Areas of particular interest: _____

_____

_____

_____

_____

_____

_____

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_____

☐ Hull and/or structural members gauged for material thickness as needed — 46 CFR 176.802

☐ Fastenings

- Rivets — NVIC 3-68
- Welding — MSM Vol. IV Ch. 6.H
- Nails, screws, bolts — NVIC 7-95
- Fastenings removed during this inspection

☐ Internal structural members — 46 CFR 176.610, NVIC 7-95

- Bulkheads
- Decks
- Tank tops
- Longitudinals
- Floors
- Frames
- Intercostals
- Stiffeners
- Beams
- Connections
- Signs of electrolysis

☐ Vessel carefully examined for fractures and previous fracture repairs

☐ Forward peak

☐ Lazarette

☐ Solid fixed ballast — 46 CFR 178.510

Watertight Integrity:

NOTE: *Guidance on watertight and weathertight inspections can be found in MSM Volume II, Chapter 6.F.5.*

☐ Hatches — 46 CFR 171.124, MSM Vol. IV Ch. 6.I.5

- Dogs or other securing appliances
- Covers
- Gaskets
- Coamings

Notes: _____

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☐ Airports below weatherdecks — MSM Vol. IV Ch. 6.I.4

- Dogs or other securing appliances
- Rims or seats
- Glass
- Dead covers
- Hinges and lugs

☐ Self-bailers and cockpit freeing ports — 46 CFR 178.420

- Check valves
- Required area

☐ Compartment or inner bottom drains (drydocking drains)

- Secure plugs

☐ Draft marks and load lines — MSM Ch. 6.F.4; 46 CFR 185.602

- Proper locations
- Legibly inscribed
- Proper spacing and size
- Load line markings verified (vessels ≥ 79 feet)

Rudders, Propellers, and Tailshafts:

☐ Rudder(s) — 46 CFR 176.610

- Skeg
- Stock
- Fastenings
- Bushings

☐ Propeller(s) — 46 CFR 176.610

- Locknuts
- Rope guard

☐ Tailshaft(s) — 46 CFR 176.630; MSM Ch. 8.D.2.a

- Stern tube and gland
- Key and keyway
- Shaft sleeve or liner
- Struts and strut bearings

Notes: _____

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Valves and Through-Hull Fittings:

NOTE: *Guidance on valves and through-hull fittings can be found in MSM Volume II, Chapter 8.F.*

☐ Sea chests, spool pieces, through-hull fittings — 46 CFR 176.610

- Strainers removed
- Welds
- Strainer fastenings
- Fastenings
- Branch connections

☐ Sea valves — 46 CFR 176.610

- Fitted where required
- Opened for examination
- Body
- Guides
- Threads
- Seat
- Stems
- Discs
- Plug cocks
- Holding down bolts
- Closure tested (local and/or remote)

Ground Tackle:

☐ Proper ground tackle — 46 CFR 184.300 (46 CFR 184.10-1)

- Anchors
- Cables

Notes: _____

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Section 6: Special Drydock Extension Underwater Survey

NOTE: *Drydock extensions of up to 30 months are available to steel or aluminum T-boats that operate on certain low-risk routes in fresh water. Guidance for conducting these surveys is found in G-MOC policy letter 3-98.*

WARNING: *ALL passengers must be removed from vessel prior to removal of sea valves.*

Review of Application for Underwater Survey:

☐ Submitted 90 days before survey date

☐ Identify diving contractor

- Number of divers
- Type of diving equipment
- NDT and repair capabilities

☐ Copy of diving operations manual

- Means of waterborne diver support

☐ Means of taking rudder bearing clearances

☐ Sea chest blanks

☐ Letter from master / chief engineer / person-in-charge

☐ Diving personnel / equipment

- NDT qualifications
- Repair qualifications
- Video / audio equipment
- Coast Guard and OSHA safety regulations

☐ Hull preparation

- Cleaning method _____
- Hull openings permanently marked

☐ Hull Maintenance and Condition Assessment Program

- Preventative maintenance plan
- Annual hull condition assessment

Notes: _____

_____

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☐ Preparatory meeting

☐ Duration of underwater survey _____

☐ Site selection

- Sufficient water depth
- Underwater hazards
- “Clear box”

☐ Plans or drawings

- Shell openings
- Docking plugs
- Bilge keels
- Welded seams and butts
- Appendages
- Anodes
- Rudder
- Propeller
- Reference points
- Watertight and oiltight bulkheads

Underwater Survey:

☐ Preliminary examination

- Third party
- Divers

☐ Underwater hull exam

- Third party supervised
- Ultrasonic gaugings

☐ On-site survey

Notes: _____

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Section 7: Appendices

Recommended US Vessel Deficiency Procedures:

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>1</td><td>Identify deficiency.</td></tr>
<tr><td>2</td><td>Inform vessel representative.</td></tr>
<tr><td>3</td><td>Record on the Deficiency Summary Worksheet (next page).</td></tr>
<tr><td>4</td><td>If deficiency is corrected prior to end of inspection, go to Step 7.</td></tr>
<tr><td>5</td><td>If deficiency is unable to be corrected prior to end of inspection, issue CG-835 in accordance with table below.
<table>
<tr><th>IF deficiency:</th><th>THEN issue CG-835:</th></tr>
<tr><td>Does NOT immediately impact crew/passenger safety, hull seaworthiness, or the environment, e.g.,
Missing placards
Permanent repairs to cracked frame</td><td>That provides a specific time for correcting deficiency, e.g.,
“X” number of days
At next drydock</td></tr>
<tr><td>Allows vessel operations to be MODIFIED to meet less stringent requirements, e.g.,
Expired international certificates
Automation defect
Insufficient lifesaving equipment</td><td>That restricts operation of vessel to meet current vessel conditions, e.g.,
Reduced route
Increased crew
Fewer passengers</td></tr>
<tr><td>DOES immediately impact crew/passenger safety, hull seaworthiness, or the environment, and cannot be modified to meet less stringent requirements, e.g.,
Missing or defective firefighting equipment
Structural defect or damage</td><td>That requires the deficiency to be corrected prior to operating vessel (“NO SAIL” item), e.g.,
Prior to carrying passengers
Prior to carrying cargo</td></tr>
</table></td></tr>
<tr><td>6</td><td>Enter CG-835 data in MIDR.</td></tr>
<tr><td>7</td><td>Enter deficiency data in MSDS.</td></tr>
<tr><td>8</td><td>Initiate Report of Violation (ROV) if necessary.</td></tr>
</table>

Deficiency Summary Worksheet:

Name of Vessel **VIN**

Deficiency	MSIS Code	Req't. Issued / Date Completed

Deficiency	MSIS Code	Req't. Issued / Date Completed

Deficiencies identified should be listed with MSIS codes. At completion of inspection/examination, any outstanding deficiencies shall be entered in MIDR or PSDR as appropriate. All deficiencies found (outstanding and completed) shall be entered in the Deficiency Summary. Worklist items, which serve only as memory joggers to complete inspection/examination (e.g., test emergency fire pump), should not be coded as deficiencies.

MSIS Codes for Deficiencies:

BS	Ballast	**DC**	Dry Cargo	**IC**	I/C Engine
BI	Bilge	**ES**	Electrical	**LS**	Lifesaving
BA	Boiler, Aux.	**FF**	Firefighting	**MI**	Miscellaneous
BM	Boiler, Main	**FL**	Fuel	**NS**	Navigation
CS	Cargo	**GS**	General Safety	**PP**	Propulsion
DM	Deck Machinery	**HA**	Habitation	**SS**	Steering
DL	Doc., Lics., Pmts.	**HU**	Hull		

Notes:

Notes:

Conversions:

Distance and Energy

Kilowatts (kW)	X	1.341	=	Horsepower (hp)
Feet (ft)	X	3.281	=	Meters (m)
Long Ton (LT)	X	.98421	=	Metric Ton (t)

Liquid *(**NOTE:** Values are approximate.)*

Liquid	bbl/LT	m^3/t	bbl/m^3	bbl/t
Freshwater	6.40	1.00	6.29	6.29
Saltwater	6.24	.975	6.13	5.98
Heavy Oil	6.77	1.06	6.66	7.06
DFM	6.60	1.19	7.48	8.91
Lube Oil	7.66	1.20	7.54	9.05

Weight

1 Long Ton	=	2240 lbs	1 Metric Ton	=	2204 lbs
1 Short Ton	=	2000 lbs	1 Cubic Foot	=	7.48 gal
1 Barrel (oil)	=	5.61 ft = 42 gal = 6.29 m^3	1 psi	=	.06895 Bar = 2.3106 ft of water

Temperature: Fahrenheit = Celsius (°F = 9/5 °C + 32 and °C = 5/9 (°F – 32))

0	=	-17.8	80	=	26.7	200	=	93.3
32	=	0	90	=	32.2	250	=	121.1
40	=	4.4	100	=	37.8	300	=	148.9
50	=	10.0	110	=	43.3	400	=	204.4
60	=	15.6	120	=	48.9	500	=	260
70	=	21.1	150	=	65.6	1000	=	537.8

Pressure: Bars = Pounds per square inch

1 Bar	=	14.5 psi	5 Bars	=	72.5 psi	9 Bars	=	130.5 psi
2 bars	=	29.0 psi	6 Bars	=	87.0 psi	10 Bars	=	145.0 psi
3 Bars	=	43.5 psi	7 Bars	=	101.5 psi			
4 Bars	=	58.0 psi	8 Bars	=	116.0 psi			